Vol 6, No 9 ARCADIAN July 27, 1984

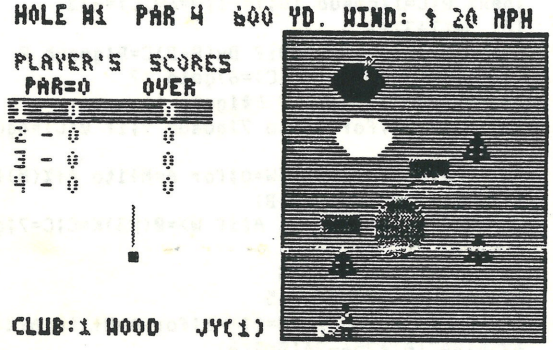
CONNECT FOUR was originally published in the August 1980 issue of Cursor newsletter. We do not have Mr. Leake's current address, and no one has been able to locate the Cursor's publisher since early 1982. We may publish other programs of quality that have appeared in the Cursor (later called Basic Express) newsletter.

MORSE CODE ADDITIONS: SPEEDS 1 - 9 correspond to 36,24,18,14,12,10,9,8,7 words per minute. In the CUSTOM mode, 9 characters are needed to make an entry. If your item has only six characters, then add 3 spaces to fill out the required 9. The PUNCTUATION selection requires 10 array values, to be added by the following input:

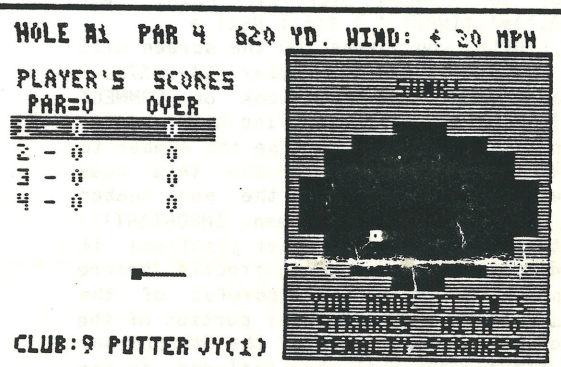
FOR A= 0 TO 9; PRINT A,; INPUT *(A); NEXT A

Then enter the following data to fill up that array:
46,44,63,45,40,58,59,34,39,47

(ADVT.)



Fairway Screen Dump



Green Screen Dump

ARCADE GOLF
By GAMBITS

FOR 16K & 32K BLUE RAM BASIC 1.1 EXTENDED RAM UNITS.
1 TO 4 PLAYERS 1 TO 4 HAND CONTROLS

No BANG-BANG SHOOT-EM-UP Here! Just your choice of 9 or 18 holes of GOLF!

EACH HOLE IS DIFFERENT — EVERY TIME!

THERE ARE TREES, SAND TRAPS, A LAKE, AND AN ALWAYS CHANGING WIND.
WITH THE WIND GUSTING UP TO 25 MPH, YOUR BALL MAY BE BLOWN OFF IT'S COURSE.

CONNECT FOUR

BY ROBERT LEAKE

The object of this game is to get 4 of your playing pieces in a row without any of your opponent's pieces in between, vertically, horizontally or diagonally, before the computer or your human opponent does. Pieces drop vertically in the selected column to the lowest unoccupied position. To select a column, move the joystick left or right and pull trigger when indicator is over desired column. Joystick 1 always goes first.

IMPORTANT!!!

The Connect Four Data String must be input BEFORE you input the main body of the program. Follow the following instructions very carefully before you do anything else or this great program will not run.

DATA DIRECTIONS:

Without a line number type the following command (all spaces are for clarity only and need not be typed):
CLEAR; NT=1; %(20000) = -24061; FOR A = -24576 TO -24068 STEP 2; PRINT #6, "%(",A,")=",;INPUT " " %(A); NEXT A

After you press GO the screen will clear and you'll see the number "%(-24576)=" printed on the screen. Now look on CONNECT FOUR DATA STRING chart and find that number (top of left column) and type the number to the right of the equal sign (in this case the number 1). Press GO and the next number will come up on the screen. IMPORTANT!!! Each time you type in a number proofread it to make sure you typed it correctly before you press GO. Be specially careful of the negative numbers on the lower portion of the 4th column and upper part of the 5th column. Those minus signs must be included in the negative numbers. If you make a mistake start from the beginning.

When you have input the last number you must do one more thing before you type the main part of the program. Type this command, again, without a line number:
%(A) = 13; %(A+1) = -256; %(A+2) = 255; %(A+3) = 8192; %(A+4) = 0

When you press GO your job of inputting data is done! If you were to give the LIST command you would see a listing of lines 1 through 7 that looks like garbage. That's alright. Data always looks like garbage to humans! It's the computer we're trying to please now, right? Before you start typing in the rest of the program we recommend that you take a fresh cassette tape and save this program with the :PRINT command. Then, later, if you have a power failure, you won't lose all your hard work typing in the data. Now don't reset your computer. Lines 1 through 7 are already in there in the form of data. Continue from there by typing in lines 8 through 49 from the program listing.

@() ARRAYS:-

@(77)=1200
@(78)=100
@(79)=8
@(80)=1
@(81)=12
@(82)=150
@(83)=8000
@(84)=0

After you're done with that, type in the array exactly as you see it at the end of the listing. EXAMPLE, TYPE: @(77)=1200 GO and so on until you have typed in all eight of the array entries listed. You are completely finished! Save the program on tape with the :PRINT command. If you've done it right, you are going to enjoy a really great game of Connect Four.

LOWERCASE = 1-BYTE KEYPAD WORDS. UNDERSCORES = SPACES. 1627 CHARACTERS

```
8  goto 14
9  box 0,43,87,1,2
10  box -49+12xC,43,9,1,1;return
11  M=%(-24225+14xE+2xC);return
12  U=Q‡7;F=RM;if F=0F=7
13  box -49+12xF,-8+(Q-1)‡7x9,11,8,3;return
14  clear ;input "__1_OR_2_PLAYERS?"P
15  BC=10;FC=183;for A=1to 76;@(A)=0;next A;c
lear ;box -1,14,87,56,1;for Q=1to 42;gosub 12
;next Q;C=1;gosub 10;T=-1;N=69;CY=-32
16  J=(T+3)‡2
17  D=C+JX(J);if C#Dif Dx(8-D)C=D;gosub 9
18  if (TR(J)#1)+(@(C)=6)goto 17
19  gosub 37;T=-T;if P#1goto 16
20  L=-9999;for C=1to 7;gosub 9;if @(C)=6goto
 36
21  E=@(C);gosub 11;W=0;for A=M+1to A+%(M)‡25
6;B=%(A)‡256-24;S=@(B)
22  W=W+@(80+S);next A;if W>=@(83)K=C;C=7;got
o 36
23  if @(C)=5goto 35
24  if W>@(77)goto 35
25  E=E+1;gosub 11;G=0;H=1;for A=M+1to A+%(M)
‡256;B=%(A)‡256-24;S=@(B)
26  if S=-3G=1
27  if S=-2W=W-2x@(78)‡3
28  if S=2W=W-@(82)‡3
29  if S=3H=0;W=-3333
30  next A;if G_W=-6666;goto 35
31  if H+(@(C)=4)goto 35
32  E=E+1;gosub 11;I=0;for A=M+1to A+%(M)‡256
;B=%(A)‡256-24;S=@(B)
33  if S=3I=1
34  next A;if I_K=C;C=7;goto 36
35  if W>L_L=W;K=C
36  next C;C=K;gosub 37;T=-1;goto 17
37  E=@(C);gosub 11;@(C)=@(C)+1;X=-49+12xC;Y=
-17+9x@(C);gosub 9;box X,Y,9,6,1;box X,Y,5,2,
(7+T)‡2;MU=84
38  for A=M+1to A+%(M)‡256;B=%(A)‡256-24;S=@(
B);if S=4goto 46
39  if SxT<0@(B)=4;N=N-1;goto 46
40  S=S+T;@(B)=S;if S#4xTgoto 46
41  R=1;Z=%(-24144+B)‡256-31;if B>31R=6
42  if B>43R=7
43  if B>64R=8
44  N=0;for Q=Zto Z+3xRstep R;gosub 12;gosub
13;N=N-1;MU=87+N;next Q;if TR(J)run
45  goto 44
46  next A;if Nreturn
47  print "______GAME_IS_A_DRAW
48  if TR(J)run
49  goto 48
```

©1984 R. Fabris

Vol 6 No 9

ARCADIAN

July 27 1984

CONNECT-FOUR DATA STRING

-24576= 1	-24474= 21311	-24372= 19274	-24270= 611	-24168= -608
-24574= 17198	-24472= 852	-24370= 23116	-24268= 15668	-24166= 672
-24572= 20047	-24470= 16679	-24368= 3419	-24266= 3398	-24164= 2465
-24570= 17742	-24468= 22358	-24366= 4	-24264= 5	-24162= 4769
-24568= 21571	-24466= 10244	-24364= 3118	-24262= 814	-24160= 7585
-24566= 17952	-24464= 17732	-24362= 11564	-24260= 13620	-24158= 9889
-24564= 21839	-24462= 22854	-24360= 12078	-24258= 18752	-24156= 11681
-24562= 3410	-24460= 781	-24358= 16190	-24256= 13316	-24154= 12961
-24560= 2	-24458= 11776	-24356= 19776	-24254= 13877	-24152= 15009
-24558= 558	-24456= 10247	-24354= 20302	-24252= 19522	-24150= 16289
-24556= 17440	-24454= 14377	-24352= 23900	-24250= 13318	-24148= 17825
-24554= 860	-24452= 18503	-24350= 2654	-24248= 13877	-24146= 19873
-24552= 8480	-24450= 23113	-24348= 11821	-24246= 17207	-24144= 21409
-24550= 24391	-24448= 2651	-24346= 16687	-24244= 22863	-24142= 22689
-24548= 8196	-24446= 10536	-24344= 20546	-24242= 13572	-24140= 3489
-24546= 8737	-24444= 14634	-24342= 21073	-24240= 14134	-24138= 7
-24544= 25162	-24442= 19002	-24340= 24671	-24238= 23378	-24136= 8238
-24542= 8198	-24440= 19531	-24338= 1889	-24236= 13827	-24134= 8737
-24540= 8737	-24438= 23900	-24336= 12078	-24234= 21815	-24132= 10019
-24538= 14371	-24436= 3166	-24334= 21315	-24232= 606	-24130= 10536
-24536= 25677	-24434= 10536	-24332= 21844	-24230= 22583	-24128= 11818
-24534= 8452	-24432= 11050	-24330= 25442	-24228= 3425	-24126= 12335
-24532= 8994	-24430= 15419	-24328= 12036	-24226= 6	-24124= 13617
-24530= 20537	-24428= 19773	-24326= 22358	-24224= 4654	-24122= 14134
-24528= 8707	-24426= 20302	-24324= 25688	-24222= 5792	-24120= 15416
-24526= 15139	-24424= 24671	-24322= 12291	-24220= 7072	-24118= 15933
-24524= 595	-24422= 2657	-24320= 17722	-24218= 8608	-24116= 17215
-24522= 15907	-24420= 10793	-24318= 1350	-24216= 10656	-24114= 17732
-24520= 854	-24418= 15915	-24316= 12592	-24214= 12192	-24112= 9030
-24518= 17444	-24416= 16447	-24314= 15676	-24212= 13472	-24110= 10788
-24516= 23109	-24414= 20816	-24312= 18760	-24210= 14496	-24108= 11045
-24514= 9221	-24412= 25170	-24310= 12295	-24208= 15776	-24106= 9777
-24512= 18213	-24410= 1891	-24308= 12849	-24206= 17568	-24104= 12844
-24510= 23624	-24408= 11050	-24306= 16447	-24204= 19872	-24102= 13101
-24508= 1885	-24406= 16961	-24304= 19531	-24202= 22688	-24100= 8244
-24506= 9508	-24404= 21587	-24302= 2393	-24200= 24992	-24098= 11815
-24504= 14374	-24402= 25685	-24300= 12592	-24198= 26784	-24096= 10273
-24502= 19274	-24400= 11012	-24298= 13106	-24196= 28064	-24094= 8751
-24500= 24671	-24398= 22083	-24296= 16961	-24194= 30624	-24092= 12329
-24498= 9225	-24396= 22615	-24294= 20302	-24192=-32608	-24090= 10787
-24496= 9765	-24394= 11268	-24292= 23386	-24190=-29536	-24088= 9265
-24494= 14631	-24392= 17464	-24290= 12551	-24188=-25852	-24086= 12843

ARCADIAN

July 27, 1984

Vol 6 No 9

KEN'S KORNER

THIS SERIES OF ARTICLES IS TO ADD SOME KNOWLEDGE TO READERS THAT MAY BE IN THE DARK ABOUT SOME OF THE BASIC NO-NO'S OF PROGRAMING!

ONE THING I HAVE NOTICED LATELY IS THAT

A LOT OF PEOPLE ARE USING SEMICOLONS (;) IN THE MIDDLE OF THEIR 'IF' STATEMENTS, LIKE THIS...

```
100 IF A=B;GOTO 100
```

THIS IS NOT ONLY POOR PROGRAMMING, BUT IT MIGHT NOT WORK SOMETIMES, ALTHOUGH I HAVE YET TO FIND A CIRCUMSTANCE TO PROVE ME RIGHT OR WRONG. ACTUALLY, THE PURPOSE OF A SEMI-COLON IS TO TELL THE BASIC CARTRIDGE THAT IT HAS REACHED THE END OF A COMMAND OR A STATEMENT. THIS IS GENERALLY USED WHEN THERE ARE TWO OR MORE TOTALLY SEPERATE COMMANDS IN THE SAME LINE, LIKE THIS...

```
100 A=ABS(Q);IF A>55GOTO 200
```

NOTICE THAT I DID NOT USE A SEMICOLON IN MY 'IF' STATEMENT. IF I HAD, I WOULD HAVE JUST BEEN USING UP ONE BYTE OF PRECIOUS MEMORY SPACE FOR NOTHING!

ANOTHER QUESTION HAS BEEN ASKED OF ME. THIS ONE IS "WHAT IS THE DIFFERENCE BETWEEN THE CHRDIS ROUTINE AND THE STRDIS ROUTINE, WHICH HAVE BOTH BEEN USED TO PUT MACHINE LANGUAGE GRAPHICS INTO SOME ASTROBASIC PROGRAMS?"

THE MAIN DIFFERENCE IS THAT THE CHRDIS (CHARACTER DISPLAY) ROUTINE IS GENERALLY USED TO DISPLAY ONLY ONE CHARACTER AT A TIME WHETHER IT BE AN 'ASCII' CHARACTER, OR A USER DEFINED CHARACTER. WHEREAS THE STRDIS (STRING DISPLAY) ROUTINE IS GENERALLY USED TO DISPLAY A STRING OF CHARACTERS, ONE RIGHT AFTER THE OTHER UNTIL A 00 (NOP) IS REACHED!

BOTH OF THESE ROUTINES ARE A PART OF THE ON-BOARD ROM AND CAN ONLY BE USED IF THE ASSOCIATED ROUTINE USED TO 'CALL UP' THESE ARE WRITTEN IN MACHINE LANGUAGE.

ONE OTHER THING YOU SHOULD TRY TO DO WITH YOUR PROGRAMS, UNLESS YOU ARE USING A MACHINE LANGUAGE PART IN YOUR PROGRAM, IS TO PUT AS MANY COMMANDS ON THE SAME LINE AS IS POSSIBLE. THIS NOT ONLY SAVES MEMORY SPACE (A SEMICOLON TAKES UP ONE BYTE AND A 'GO' TAKES UP ONE BUT A LINE NUMBER TAKES UP TWO PRECIOUS BYTES), IT ALSO ADDS SPEED!
EACH TIME YOU USE A SEMICOLON INSTEAD OF A NEW LINE YOU SAVE TWO BYTES! E CAREFUL, THOUGH, AS THERE ARE A COUPLE OF TIMES THAT YOU CAN'T DO, LIKE THIS:

1) AFTER USING A 'GOTO ' IN A LINE WILL MAKE THE REST OF THE LINE 'NULL AND VOID', OR PUT ANOTHER WAY, IT WILL **NEVER** GET TO WHAT IS FOLLOWING THAT STATEMENT!

2)WHEN YOU USE AN 'IF' STATEMENT AND THE ADDED STATEMENTS AFTER IT DO NOT PERTAIN TO THE 'IF' STATEMENT! THESE WILL ONLY BE DONE WHEN THE 'IF' IS TRUE. WHEN THE IF IS FALSE, THE BASIC WILL GO ON TO THE NEXT LINE IN THE PROGRAM AND FORGET ABOUT THE REST OF THE INFORMATION IN THE LINE!

ONE LAST LITTLE TID-BIT.
DON'T EVER SAY .... GOSUB 55;RETURN
DOING THIS TAKES UP TWO EXTRA BYTES AS COMPARED TO .... GOTO 55
THIS WILL DO THE SAME JOB AND ACTUALLY DO IT FASTER!

LET'S SEE WHAT IS GOING ON HERE. EVERY TIME YOU SAY GOSUB THE PLACE THAT YOU ARE CURRENTLY MUST BE SAVED BY THE COMPUTER SO THAT IT KNOWS WHERE TO GO TO WHEN IT HITS THE 'RETURN ' LOCATED AT THE END OF THE SUBROUTINE. LET'S LOOK AT THIS SAMPLE..

```
100 A=ABS(Q);RETURN
110 B=ABS(P);GOSUB 100;RETURN
120 GOSUB 110;RETURN
300 C=D;GOSUB 120
```

LET'S START AT LINE 300.THIS IS THE ORDER OF EVENTS. FIRST C IS SET TO THE NUMBER IN D. THEN THE BASIC SEES THE GOSUB COMMAND, LOOKS AT WHERE IT HAS TO GO, (IN THIS CASE TO LINE 120) AND THEN IT "PUSHES", OR SAVES IT'S PLACE AFTER THAT COMMAND SO THAT IT CAN EXECUTE THE NEXT STATEMENT WHEN IT HITS THE RETURN THAT WILL SEND IT BACK TO THIS SPOT. SO ACTUALLY, EVERY TIME THAT YOU USE A GOSUB, THE PLACE IS SAVED. IT GETS REMOVED WHEN THE RETURN FOR THAT POINT IS MET. NOW IT MUST START FROM THE VERY BEGINNING OF THE PROGRAM AND 'LOOK' FOR LINE #120 WHEN TI FINDS IT, IT THEN SEES THE GOSUB 110 AND THEN TI SAVES THAT POINT AGAIN! IN LINE 110 THERE IS A GOSUB 100. THIS ALSO SAVES THE PLACE. FINALLY WHEN IT GETS TO THE END OF LINE 100 IT REACHES THE FIRST RETURN. NOW IT HAS TO LOOK AT THE STACK OF PLACES THAT IT HAS SAVED AND THEN GO TO THE LAST PLACE THAT WAS PUT INTO THIS STACK, WHICH WAS IN LINE 110, WHERE IT THEN ENCOUNTERS ANOTHER RETURN. IT NOW LOOKS AT THE ADDRESS THAT IS NOW ON THE TOP OF THE STACK (IT THREW OUT THE OLD PLACE!). THIS THEN SENDS THE PROGRAM TO LINE 120 FOR A FINAL RETURN AND THEN THE LAST PLACE IS THEN TAKEN FROM THE STACK! WHEW! THAT IS AN AWFUL LOT OF WORK! LET'S SEE HOW WE CAN REDUCE SOME OF THIS WORK.

```
100 A=ABS(Q);RETURN
110 B=ABS(P);GOTO 100
300 C=D;GOSUB 110
```

YOU'LL NOTICE THAT THERE IS NO LONGER A LINE 120. THIS LINE WAS REDUNDANT. NOW THERE IS ONLY ONE TIME THAT THE BASIC HAS TO SAVE IT'S PLACE. THE GOTO HOWEVER HAS TO DO THE SAME THING THAT THE GOSUB HAS TO DO TO FIND IT'S PROPER LINE. THAT IS, START FROM THE VERY BEGINNING OF THE PROGRAM AND SEARCH UNTIL IT FINDS THE LINE! THIS CAN STILL BE REWRITTEN TO BE FASTER IF YOUR PROGRAM WILL PERMIT THIS CONFIGURATION.

```
100 B=ABS(P)
110 A=ABS(Q);RETURN
300 C=D;GOSUB 100
```

CONTINUED ON P. 83

©1984 R. Fabris

Vol 6 No 9 ARCADIAN July 27, 1984

GETTING ORGANIZED

BY ARTHUR HALE

IN TODAYS WORLD OF THE EVER FAST GROWING HIGH TECHNOLOGY, THE USE OF PAPER IN ORDER TO KEEP PROPER RECORDS IS BECOMING A THING OF THE PAST. IN THIS SHORT ARTICLE I HOPE TO POSSIBLY GIVE SOMEONE OUT THERE A GOOD WAY TO STILL USE PAPER TO THEIR ADVANTAGE.

DO YOU HAVE TAPES (FOR THE ARCADE) SCATTERED ALL OVER THE HOUSE FOR THE LACK OF PROPER SPACE TO STORE THEM AROUND THE COMPUTER? MAYBE YOU'RE ONE OF THE GUYS (OR GALS) THAT USE 90-MIN. TAPES TO STORE ABOUT 100 PROGRAMS ON ONE SIDE. THERE'S NOTHING WRONG WITH THAT IF YOU CAN FIND THE PROGRAM WITH EASE. A FILE SEARCH IS FINE TO USE FOR A FEW PROGRAMS, BUT IF YOU HAVE 20 OR MORE ON THE SAME TAPE, YOU MAY ALSO HAVE A LONG WAIT. THIS IS WHAT WE USE PAPER FOR!

LET ME START BY SAYING IF YOUR TAPE RECORDER DOES NOT HAVE A DIGITAL TAPE COUNTER ON IT, YOU SHOULD PURCHASE ONE AS YOU SOON SHALL SEE. NOW LET'S GET TO IT.

MY FIRST SUGGESTION TO YOU WOULD BE TO USE THE LONGER TAPES, MAYBE NOT THE 90-MIN. JOBS, BUT ONE LONG ENOUGH TO STORE A GOOD NUMBER OF PROGRAMS ON ONE SIDE. SECONDLY, PLACE EACH PROGRAM THE SAME DISTANCE APART (I START MY FIRST PROGRAM AT 10 ON THE TAPE COUNTER AND PLACE MY SECOND AT 20, THIRD AT 30, ECT...) FOR EASE IN LOCATING EACH PROGRAM. NEXT, HAVE ONE TAPE FOR EACH SPECIFIC CATEGORY (EX. ARCADE GAMES, EDUCATIONAL, ENTERTAINMENT, UTILITIES, ECT...). YOU WILL HAVE TO START A ENTERTAINMENT II, ECT., OF COURSE WHEN THE NEED ARRIVES. WITH THIS METHOD ONE

SUPPOSE I WANTED TO PLAY GEORGE MOSES'S "ASTRO-ZAP", ALL I WOULD HAVE TO DO IS LOOK ON MY LIST OF THE ARCADE GAMES TO FIND THE LOCATION OF THE FIRST OF THE PROGRAM. THERE WOULD ALSO BE A SHORT SET OF INSTRUCTIONS FOR THE GAME. I PLACE MY TAPE (ARCADE GAMES) IN THE RECORDER, MAKING SURE IT IS REWOUND TO THE START OF THE TAPE, I THEN RESET THE COUNTER. IF THE GAME IS THE 8TH GAME ON THE TAPE, I FAST FORWARD IT UNTIL THE COUNTER READS 79, OR SOMETHING RIGHT BEFORE 80. I THEN DO MY INPUT THING (:INPUT;RUN GO) AND I'M ON MY WAY.

EXTENDED BASIC PEOPLE CAN USE THIS WITH EVERYTHING. I USE IT FOR WORD PROCESSING, CHECK BOOK REGISTER, HOME FILING OF ALL KINDS, AS WELL AS THE THINGS LISTED ABOVE, ALTHOUGH A LONGER PROGRAM MAY CHANGE THE SPACING SOMEWHAT. I USE MY PROCESSOR TO PRINT OUT MY LIST AND NOTES. THIS WAY I ONLY HAVE TO UPDATE IT EVER SO OFTEN, NOT HAVING TO REDO THE WHOLE THING.

I HOPE SOMEONE CAN USE THIS INFORMATION TO THEIR ADVANTAGE. NOW GO GET ORGANIZED!! LATER.

ARTHUR HALE
2719 WASHINGTON AVE.
SAINT ALBANS W. VA. 25177
(304) 722-6440

CONT. FM. P. 82

IN THIS WAY, THE BASIC ONLY HAS TO SEEK OUT ONE PLACE! IF YOU ONLY WANT THE EQUATION IN LINE 110 THEN JUST TYPE IN GOSUB 110 INTO

STRATEGIC AIR COMMAND

BY BOB WEBER & GEORGE MOSES

```
 LOWERCASE = 1-BYTE KEYPAD WORDS. UNDERSCORES
 = SPACES.     1612 CHARACTERS

___1_ _NT=-1;E=9000;F=1000;H=2000;I=7000;J=5
000;L=3000;O=8000;P=4000
__10_clear ;BC=rnd (256);FC=BC+4;S=4;B=32767;
W=60;gosub 10000;clear ;gosub F;Q=30;A=0;gosu
b H;V=A
__15_CY=40;print "POPULATION=_",#1,A,",000
__20_R=0;W=W-20;if A<99CY=-25;print "YOU_LOSE
!";goto I
__30_print "YOU_HAVE_",#1,Q,"_MISSILES";print
 "ENEMY_HAS_",#1,Sx5,"_MISSILES";B=A;for Z=1t
o H;next Z
__35_if S=0if V-B<100CY=-25;print "YOU_WIN";g
oto I
__40_if S=0CY=-25;print "YOU_LOSE!";goto I
__50_box 0,10,160,67,2;print "******_ENEMY_AT
TACK_******";&(16)=49;&(17)=243;&(18)=244;&(1
9)=245;&(21)=15
__60_&(22)=255;&(23)=10;for Z=1to H;next Z;bo
x 0,10,160,67,2;gosub L;Y=W;for Z=1to 5;box @
(Z),Y,1,3,3;next Z
__65_Y=Y-1;&(16)=Y+74;for Z=1to 5;if @(Z)=0go
to 100
__70_if PX(@(Z),Y-1)NT=0;gosub O
__80_if PX(@(Z),Y)=0@(Z)=0;goto 100
__90_box @(Z),Y-1,1,1,1;box @(Z),Y+2,1,1,2
_100_next Z;if Y<-38gosub P;goto 140
_110_if TR(1)if R=0if Q>0Q=Q-5;R=1;gosub P;N=
-30;for M=6to 10;box @(M),N,1,3,3;next M
_120_if R=1gosub J
_130_goto 65
_140_A=0;gosub H;if B-A=0CY=0;print "NO_LOSSE
S";goto 160
_150_CY=0;print #1,B-A,",000_KILLED
_160_S=S-1;goto 15
1000_box 0,-42,160,3,1;for G=-80to 79step 3;b
ox G,-38,rnd (5),3+rnd (6),1;for N=1to 2
1010_box G,-32-rnd (9),1,rnd (2),2;next N;nex
t G;return
2000_gosub E;box 0,5,160,75,2;CY=40;print "CO
UNTING_POPULATION
2010_for Y=-37to -34;for X=-80to 79;if PX(X,Y
)A=A+1
2020_MU=A;next X;next Y;if A>B_A=B
2030_NT=-1;return
3000_for Z=1to 5
3010_A=rnd (150)-75;for C=1to 5;if (@(C)=A)+(
A=0)goto 3010
3020_next C;@(Z)=A;next Z;return
4000_for Z=6to 10
4010_A=rnd (150)-75;for C=6to 10;if @(C)=Agot
o 4010
4020_next C;@(Z)=A;next Z;return
5000_N=N+1;for M=6to 10;if PX(@(M),N)=0goto 5
030
5005_if JX(1)box @(M),N-1,1,3,3;@(M)=@(M)+JX(
1);box @(M),N-1,1,3,3
5010_box @(M),N+1,1,1,1;box @(M),N-2,1,1,2
5020_if N>=Y&(21)=255;&(16)=1;box @(M),N,9,9,
1;box @(M),N,9,9,2;for D=1to 500;next D;&(16)
=Y+74
5030_if N>Y+1R=0
5040_next M;&(21)=15;return
7000_CY=40;print "ORIGINAL_POP._=_",#1,V,",00
0
7010_print "TOTAL_LOSS_=____",#1,V-A,",000";p
rint "PRESS_ANY_KEY_to PLAY_____AGAIN";if KPr
un
```


ASTROBASIC SOFTWARE ON CASSETTE TAPES

1. Morse Code Trainer with Morse Code II - a true trainer with programmable levels, speed, screen mode and learn/test mode. Includes lesson plan.

2. Astro-Analyst with Memomax - a symbol interpretation program. Gives an individual personality profile. Memomax- a memory game.

3. Rhythm Box in 4/4 and 3/4- 3 part harmony. Keeps the beat. 7 styles, 3 speeds. Remote control of start/stop-fade and vibrato on/off. Includes chord charts and foot switch/wave(tone) shaper schematics.

4. →

PROJECT - CYCLOPS RADAR BASE

You steer the radar-launched missile into the eye of the cyclops. If you miss him, he'll charge and fire at your base. (A P.P.I. - Plan Position Indication radar display simulation.)

Order by mail: (check or M.O.)

Any listed program $8.00
Buy two and take a third tape absolutely FREE

Enclosed is $_____
Please send the following:

__1- Morse Code Trainer & II
__2- Astro-Analyst & Memomax
__3- Rhythm Box
__4- Project Cyclops Radar Base

NAME _____

ADDRESS _____

CITY-STATE _____

ZIP_____

Address all orders to:

FRED RODNEY
1190 Albany Avenue
Brooklyn, N.Y. 11203

©1984 R.Fabris

Vol 6 No 9

ARCADIAN

July 27, 1984

LOWERCASE = 1-BYTE KEYPAD WORDS. UNDERSCORES = SPACES. 757 CHARACTERS

```
10  clear ;SM=1;CY=-24;CX=-63;print ">>>BY_JOE_PEOPLES<<<"
20  A=-72;CY=30;CX=A;print "B";CY=22;CX=A;print "O";CY=14;CX=A;print "A"
30  CY=-2;CX=A;print "N";CY=-10;CX=A;print "Z";CY=-13;CX=-65;print "A";CY=20;CX=5;print "GAS";CX=2;print "WELL"
40  line -62,-7,4;line -62,30,1;line -42,30,1;line -40,29,1;line -39,28,1;line -39,26,1;line -36,27,1;line -33,26,1
50  line -29,28,1;line -24,28,1;line -19,32,1;line -10,35,1;line -10,12,1;line -11,4,1;line -13,-2,1;line -17,-5,1;line -19,-4,1;line -23,-9,1
```

LOWERCASE = 1-BYTE KEYPAD WORDS. UNDERSCORES = SPACES. 1604 CHARACTERS

```
1   .103305050x1x10000
2   goto 40
3   CY=-24;CX=-60;return
4   CX=-60;CY=40;return
5   if TR(P)gosub 8;return
6   goto 5
7   gosub 4;print #0,"CAPITAL_$",@(P),",",@(P+4)#100,RM#10,RM,"__";return
8   box 0,-31,160,26,2;return
9   W=@(P);Q=@(P+4);W=W+C#1000;Q=Q+RM;if Q<0Q=1000+Q;W=W-1
10  if Q>999W=W+Q#1000;Q=RM
11  @(P)=W;@(P+4)=Q;gosub 7;return
12  P=P+1;if P>N_P=1
13  goto 50
14  NT=12;for A=-24573to -24556;MU=%(A);next A;NT=0;return
15  for L=Lto 35step 2;box K,L,2,2,3;next L;for A=1to 9;box K+A,L,1,1,3;box K-A,L,1,1,3;L=L-A#2;next A;return
16  box K,-20,2,19,1;gosub 8;return
17  S=rnd (53)-63;T=rnd (54)-19;return
18  box X,Y,2,2,3;return
40  gosub 4;N=KN(1)+75+3;print 'PLAYERS?_',#0,N;if TR(1)=0goto 40
42  gosub 8
50  gosub 4;print "COMPANY_#",P,"__";gosub 5
52  B=1;gosub 7;C=Px10;for A=C+1to C+@(C);gosub 3;print "WELL_NO>",B;if @(A)=0goto 58
54  if rnd (10)=5@(A)=0;print "__RAN_DRY";goto 58
56  CX=0;print #0,@(A)#100,"_CUFT/DAY";CX=0;p
```

```
60  line -23,-11,1;line -25,-12,1;line -25,-10,1;line -28,-13,1;line -27,-15,1;line -29,-16,1;line -32,-18,1;line -37,-15,1;line -36,-14,1
70  line -39,-14,1;line -40,-15,1;line -43,-15,1;line -47,-15,1;line -57,-13,1;line -56,-10,1;line -59,-9,1;line -62,-7,1
80  line 35,-10,4;line 47,31,1;line 51,31,1;line 66,-10,1;line 38,-1,1;line 58,11,1;line 45,20,1;line 55,20,1;line 41,11,1;line 62,-1,1;line 35,-10,1
90  box 50,-14,35,8,1;box 49,32,5,2,1;box 50,21,11,2,1;box 50,13,17,2,1;box 50,0,25,2,1;CY=-40
```

```
58  gosub 5;B=B+1;next A;X=-40;Y=0;if @(P)<10CY=-30;print "__BANKRUPT";goto U
60  if @(P)>999gosub 8;gosub 3;NT=0;print "GAS_WELL_BONANZA";gosub 14;goto 60
62  gosub 18;X=X+JX(P)x2;Y=Y+JY(P)x2;if TR(P)goto 66
64  gosub 18;goto 62
66  E=rnd (99)x200;F=rnd (29)+8;G=rnd (89);H=rnd (12)x800;I=rnd (30)x980;if rnd (3)=2gosub 17
68  gosub 3;print "GELOGICAL_STUDY_$",#0,E
70  if TR(P)C=-E;gosub 9;goto 76
72  if JX(P)goto 80
74  goto 70
76  gosub 3;print "ODDS_OF_GAS_STRIKE_",#0,G,"%__";if ABS(X-S)<10if ABS(Y-T)<10G=G+10
78  print "__$/FT._DOWN_$",#0,F;print "__DEPTH_OF_RES._",#0,H,"FT__";;gosub 5
80  gosub 3;print "PROPERTY_RIGHTS_$",#0,I
82  if TR(P)C=-I;gosub 9;goto 88
84  if JX(P)goto U
86  goto 82
88  J=0;K=50;L=-9;gosub 8;box K,-31,35,26,1
90  M=(100-G)+10;R=rnd (MxM);NT=5;MU=%(8151);NT=0;box K,L,2,2,2;O=L;L=L-2;if JX(P)gosub 16;goto U
92  J=J+300;C=-Fx300;gosub 9;gosub 3;print "DRILLING_AT:";print "__",#0,J,"_FT";if J>H+2000print "__DRYHOLE",;gosub 16;goto U
94  if J>H-2000if M=Rgosub 15;L=0;gosub 14;gosub 15;gosub 16;goto 98
96  goto 90
98  C=Px10;D=rnd (275)x100;F=rnd (50);for A=C+1to C+@(C);if @(A)=0@(A)=D+F;goto V
100 next A;@(C)=@(C)+1;@(@(C)+C)=D+F
```

ASTROCADE

Summer Sale

Now! Get your favorite Astrocade Cartridge for the lowest prices ever! Prices normally $24.95 to 34.95 now $4.95 each. Sale running to September 15, 1984.

Choose from the Following Titles:

2001 280Zzzap/Dodgem
2002 Seawolf/missile
2003 Red Baron/Panzer Attack
2004 Brickyard/Clowns
2005 Star Battle
2009 Astro Battle
2010 Dogpatch
2012 Space Fortress
3001 Baseball
3002 Football
3005 Bally Pin
4004 Biorhythm
5002 Blackjack/Poker

We also are sorry to announce that the cartridges from Esoterica Ltd.,Treasure Cove and BlastDrbbds are no longer available.

By the way, we still have in stock some of the newest games for the Astrocade, such as Cosmic Raiders, Solar Conqueror, Muncher, Ms. Candyman, Sea Devil, and Sneaky Snake. This group are not on sale.

Rembember, Sale running to September 15 for all of the above cartridges--$4.95 each also please include $1.50 for shipping. Quantity is limited so buy now. Sale limited to existing stock. Once we are out--it is over

ABC Hobbycraft
2155 E. Morgan
Evansville IN 47711
(812) 477-9661

```
 LOWERCASE = 1-BYTE KEYPAD WORDS, UNDERSCORES
 = SPACES.     1662 CHARACTERS

1  NT=-0;clear ;CY=0;print '___ACME__BATTERY_
_DRIVING__________TEST';input '____#_OF_PLAY
ER'S?_(1-4)'Y;if Y>4goto 1
2  clear ;T=0;for X=1to Y;S=500;D=0;FC=125;BC
=40
3  A=-50;B=40;D=0
4  E=2;F=2;G=2;H=2;I=2;J=2;K=2;L=2;M=2;N=2;O=
2;P=2;Q=2;R=2
10  box -1,0,151,88,1;box 0,0,148,86,2;box 0,
0,138,78,1;box -30,0,5,82,2;box 40,0,5,82,2
11  box 0,5,138,5,2;box 0,-8,138,5,2;box 0,-2
2,138,5,2
12  box -50,37,8,4,E;box 8,10,4,4,F;box 45,25
,4,4,G;box 67,0,4,4,H;box 45,13,4,4,I;box 45,
-2,4,4,J;box 36,0,3,3,K
13  box 36,-4,3,3,L;box -48,-30,4,4,M;box 45,
-30,4,4,N;box -38,-37,4,4,O;box -52,-17,4,4,P
;box -34,-14,4,4,Q;box -60,-13,4,8,2_
24  box -64,-15,4,4,R
25  box -44,-30,5,20,2;box A,B,3,3,3
27  CY=18;CX=-22;print '_STOP:#',#2,D
28  if D=13;for A=1to 2000;next A;clear ;CY=0
;print '________VERY_GOOD';for A=1to 2000;nex
t A;T=T+1;goto 200
35  CY=30;CX=-22;print '_DRIVER',#2,X
36  if D>0goto 50
49  for C=Sto -0step -1
50  box A,B,3,3,3
51  A=A+JX(X)x100÷50
52  B=B+JY(X)x100÷50
53  Z=0;NT=0;NT=-1;for V=17to 22;&(V)=200;nex
t V;&(16)=255
54  if PX(A,B)-0;A=-50;B=40
55  CY=-30;CX=-22;print '_TIME:',#2,C
56  box A,B,3,3,3
57  if A>8-3if A<8+3if B>9-3if B<9+3_B=5;F=1;
goto 150
58  if A>44-2if A<44+2if B>-2-2if B<-2+2_A=40
;J=1;goto 150
59  if A>67-2if A<67+2if B>0-2if B<0+2_A=70;H
=1;goto 150
60  if A>44-2if A<44+2if B>13-2if B<13+2_A=40
;I=1;goto 150
61  if A>44-2if A<44+2if B>25-2if B<25+2_A=40
;G=1;goto 150
62  if A>36-2if A<36+2if B>0-2if B<0+2_A=40;K
=1;goto 150
63  if A>36-2if A<36+2if B>-4-2if B<-4+2_A=40
;L=1;goto 150
64  if A>-45-2if A<-45+1if B>-30-2if B<-30+2_
A=-44;M=1;goto 150
65  if A>44-2if A<44+2if B>-30-2if B<-30+2_A=
40;N=1;goto 150
66  if A>-38-2if A<-38+2if B>-38-2if B<-38+2_
B=-41;O=1;goto 150
67  if A>-52-2if A<-52+2if B>-18-2if B<-18+2_
B=-21;P=1;goto 150
68  if A>-34-2if A<-34+2if B>-14-2if B<-14+2_
A=-30;Q=1;goto 150
69  if A>-64-2if A<-64+2if B>-15-2if B<-15+2_
A=-60;R=1;goto 150
70  if C=0;CY=-15;CX=-25;print '_GAME_OVER';n
ext X;NT=-0;goto 190
72  next C
150  D=D+1;goto 11
190  STOP
200  if T=1_S=400;FC=165;BC=160;goto 3
201  if T=2_S=300;FC=120;BC=140;goto 3
202  if T=3_S=275;FC=180;BC=120;goto 3
203  goto 3
```

Henry Sopko
2705 King Street East #110
Hamilton, ON Canada
L8K 1Y4

ACME DRIVING TEST requires you to drive your car along the road, keeping away from the curb. You must enter each stop by lining up with it, then pushing the joystick in the right direction. The computer will put you back on the road, ready to go onward. Each new screen (change in color) cuts the time factor downward, making it more and more difficult to complete the test.

©1984 R. Fabris

ADS

WANTED --Tapes (3) by Todd Johnson of Spokane. Contact George Krec, 1932 Woodward Ave., Cleveland, OH, 44118

VACATION COMING UP in September, and we will drop one issue as a result. We will make up for it in October, with a double-size job, at least. October will also be the last issue of the fiscal year - everyone's subscription started with the November 1983 issue, regardless of when they actually subscribed.

GAME PLAYER COLUMN is not included this time - Mike indicated to me that it would be late.

ARCADIAN

Robert Fabris, catching up
3626 Morrie Drive
San Jose, CA 95127

the SOURCE TCD 959

FIRST CLASS
U. S. POSTAGE
PAID
Sunnyvale, CA
Permit No. 931

A. BERGANTZ
2917 HEADLAND DR
ST. CHARLES MO 63301